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must have passed without the formation of deposits in this place, or they must have been removed again in the diluvial period.

B. The White Clay.

While the lignites and their alternating clays present us with a sub-tropical vegetation, the plants of the White Clay exhibit a totally different character, and must have had their origin in an altogether distinct period.

Four species—three of *Salix* and one of *Betula*—have been found in this overlying mass, no one of which appears to differ from species now living. The presence of the *Betula* (*B. nana*) is conclusive for a diluvial climate, that is, a colder climate than Devonshire has at the present day; for this dwarf birch is an Arctic plant, which has no British habitat south of Scotland, and which occurs in Mid Europe only on mountains and Sub-Alpine peat mosses. The evidence of the willow-leaves is to the same effect, indicating that at this period Bovey Heathfield was a cold peat-moor.

November 30, 1861.

ANNIVERSARY MEETING.

Sir BENJAMIN COLLINS BRODIE, Bart., President, in the Chair.

Dr. Carpenter reported, on the part of the Auditors of the Treasurer's Accounts, that the total receipts during the past year, including a balance of £512 13s. 3d. carried from the preceding year, amount to £4414 0s. 8d.; and that the total expenditure during the same period amounts to £3729 3s. 7½d., leaving a balance in the hands of the Treasurer of £684 17s. 0½d.

The thanks of the Society were voted to the Treasurer and Auditors.

The Secretary read the following lists:—

Fellows deceased since the last Anniversary.

Honorary.

H.M. Frederick William IV., King of Prussia.

On the Home List.

George, Earl of Aberdeen.	The Right Hon. Sir James R.
David Baillie, Esq.	G. Graham, Bart.
Dr. William Baly.	Henry Gray, Esq.
George Bishop, Esq.	Robert William Hay, Esq.
Rev. Edward George Burrows,	George Crauford Heath, Esq.
D.D.	Eaton Hodgkinson, Esq.
Sir William Cubitt.	Sir James Cosmo Melvill.
Rev. James Cumming.	Sir Francis Palgrave.
Rev. Joshua Frederick Denham.	Lieut.-General Sir Charles Wil-
The Right Hon. Charles Tenny-	liam Pasley.
son D'Eyncourt.	Benjamin Phillips, Esq.
Lieut.-General Sir Howard Dou-	John Thomas Quekett, Esq.
glas, Bart.	Robert Rigg, Esq.
William Robert Keith, Lord	Rear-Admiral the Hon. J. Fre-
Douglas.	derick Fitzgerald de Ros.
Thomas Flower Ellis, Esq.	Edward John Rudge, Esq.
William Henry Fitton, M.D.	Alexander Robert Sutherland,
Sir John Forbes, M.D.	M.D.
Hugh, Earl Fortescue.	Rev. Samuel Wix.

On the Foreign List.

Friedrich Tiedemann.

Fellows elected since the last Anniversary.

On the Home List.

Charles Spence Bate, Esq.	William Newmarch, Esq.
Heinrich Debus, Esq.	Edmund Alexander Parkes, M.D.
Campbell De Morgan, Esq.	William Pole, Esq.
The Right Hon. George Gran-	Philip Lutley Sclater, M.A.
ville Francis Egerton, Earl of	Charles F. A. Shadwell, Capt.
Ellesmere.	R.N.
Thomas A. Hirst, Esq.	Henry J. Stephen Smith, M.A.
A. Matthiessen, Esq.	William Stokes, M.D.
J. Clerk Maxwell, M.A.	George Johnstone Stoney, M.A.
Ferdinand Müller, M.D.	

The President then addressed the Society as follows :—

GENTLEMEN,

THE peculiar circumstances under which the Council thought fit to propose me for re-election as President at the last Anniversary are, I apprehend, sufficiently known to make it unnecessary for me to trouble you with any observations on the subject. There was then reason to believe that in a short time I should be in that state which would enable me to resume all the duties of my office. Unfortunately those expectations were not realized ; and you will, I am sure, easily conceive how deep was the disappointment to myself, that I should have been prevented, during the whole of the last session, from being present at our Meetings. The President of your Society, however, has other duties besides that of presiding in this Chair, and to these I hope that I have not been altogether inattentive. Various subjects connected with the affairs of the Royal Society have from time to time demanded the attention of myself and the other Officers ; and the discussions to which these have led have, I have reason to believe, not been unproductive of a good result.

Referring to the events of the last year, I feel that I may with perfect confidence congratulate you on the position which we occupy. We have not, indeed, had to record any of those grand and startling discoveries by which some former epochs of our history have been distinguished. There never, however, was a period at which so many individuals, well qualified for the task, have been engaged in scientific investigations ; and our published volumes bear ample testimony to the fact, that it is not in one only, but in every department of physical knowledge that a steady progress is being made. The Fellowship of our Society has never been a greater object of ambition than it is at present, nor do I believe that it has ever been held in higher estimation by the public. Our weekly Meetings as I am informed, have been often productive of great interest, and sufficiently well attended : but on this last point I take this opportunity of making a few remarks, in order that I may correct what appears to me to be a great misunderstanding under which some have laboured on the subject.

Probably not more than one third of our Fellows are permanently

resident in London, and of these a large proportion are engaged in occupations which leave only a limited portion of time at their own disposal. The subjects which are brought under consideration, though frequently of paramount importance, are not of that general interest which would attract ordinary persons; nor, indeed, if we take any one of them, can it be regarded as equally attractive to every individual belonging to our own body. In the progress of knowledge, science has become divided and subdivided into many departments, and the principle of the division of labour has necessarily come into operation in these as well as in all other pursuits. A communication, which would be highly attractive to a chemist, would not be equally so to a comparative anatomist or a physiologist; nor would the results of the inquiries on the subject of terrestrial magnetism, which have of late been carried on in almost every part of the world, important as they may eventually prove to be, be well comprehended except by the few who have bestowed their special attention on them. It seems to me, therefore, not reasonable to suppose that the Meetings of the Royal Society should be so numerously attended as more popular assemblies.

There is another matter as to which I conceive that some misapprehension has at times prevailed, namely, the relation in which our Society stands, or ought to stand, to the Government of the country. In many of the continental states there is a society of individuals, under the name of an "Academy," engaged in the pursuit of science, limited in number, and each of them receiving an annual stipend from the public treasury. Such a system may be regarded as offering a premium to those who engage in scientific investigations; and the great results which have been obtained sufficiently demonstrate that where it has been established it has had a very beneficial operation. It would be, however, entirely inapplicable to an institution such as ours, consisting as it does of between 600 and 700 Members. Then the foreign Academies to which I have referred are entirely subjected to the Government, without whose approbation the election of a new member is incomplete. Now, it is plain that a system so inconsistent with the sentiments and habits of the inhabitants of these islands would find little favour here; and I apprehend that there is no individual among those whom I have now the honour of addressing, whatever his opinions on the abstract prin-

ciple may be, who would not think it a most rash proceeding to apply it to the reconstruction of a Society such as ours, which has been steadily advancing in its career, and which is now, after the lapse of 200 years, more active and vigorous and useful than at any former period of its existence.

The best inducement to the cultivation of science is the love of knowledge, combined with that desire of honourable distinction—“*that last infirmity of noble minds*”—of which we must not complain, as it has led to such grand results; and experience shows that these are all-sufficient for the purpose. If any worldly advantage ever accrue to those who are thus engaged, that may be regarded as almost an accidental circumstance, which no one could have anticipated in the beginning.

Such being the state of things among us, I feel bound at the same time to say, that I cannot join with those who complain that the interest of science has been neglected by the Government. The Fellows of the Royal Society have never wished to forfeit their independence, by claiming, in their capacity as Fellows, any personal benefit for themselves. The connexion of the Royal Society with the Government has been simply that of a mutual interchange of good offices. On the one hand, the Society has always been ready to assist those who are intrusted with the management of public affairs with its opinion and advice; and the occasions on which such assistance has been required have been sufficiently numerous. On the other hand, it has rarely, if ever, happened that any representation made by the Royal Society in the interests of science has not received the attention which it required. A sum voted annually by Parliament for the purpose of assisting those who are engaged in scientific investigations has been placed at the disposal of the Royal Society, to be distributed at the discretion of the Council. The extensive suite of rooms which we now occupy are the property of the State, and a similar accommodation has been afforded to four other of the chartered scientific societies; while another more popular institution has an annual grant from the public treasury, in order that it may be the better enabled to carry out the objects for which it was established.

There is nothing by which the pursuit of science in the present day is more signally distinguished than the greater accuracy and

precision with which those investigations to which mathematical reasoning is either not at all or only to a limited extent applicable are conducted as compared with what was the case when men's minds were first directed to these subjects ; nor is there any prospect of our ever returning to those hypothetical systems which prevailed among scientific inquirers formerly. If there be at present any danger to the cause of science, it is of a totally different kind. The time has arrived when the discoveries of science are becoming extensively applied to commerce and manufactures, and the arts of common life. The greater part of society contemplate the achievements of science under this point of view, and estimate its value only as it affects the material interests of the country or of themselves. The prevailing study of political economy—and I say this without denying the great advantages which the community has derived from this comparatively new science—by directing men's minds so much to the increase of national wealth, as the object most deserving of our attention, has the effect of promoting the extension of this utilitarian principle more widely among us. The danger to which I allude is, that the cultivators of science might themselves be led to participate too largely in these utilitarian views. If it should be so, science must undoubtedly descend from the high station which it at present occupies. Nor can this happen without great injury to the cause of knowledge itself. The mere utilitarian philosopher, having his views limited to some immediate practical result, might, like the alchemists of old, elicit some new facts, but would discover no new principle, and after a long life would know no more of the laws of nature than he knew in the beginning. Eventually, even as to their gross material interests, society would be a loser. The sailor would never have had placed at his disposal the means of ascertaining the longitude, if philosophers, without reference to this object, had not studied mathematics and the laws of planetary motions ; nor would London and Paris have ever been placed, as they now are, in instantaneous communication with each other, if those who began with the simple fact of the muscles of a frog's leg being made to contract by the contact of certain metals had not pursued these inquiries until they reached the laws of Voltaic electricity, never dreaming of the great invention which was ultimately to arise out of these researches in the shape of the electric telegraph.

The time has arrived for my resigning into your hands the office to which you were pleased to elect me three years ago. This has not only been the greatest honour which has ever been bestowed on me, but it has also been one of the most gratifying circumstances of my life, to have received such a testimony of the good opinion of individuals so distinguished for their genius and knowledge as the Fellows of the Royal Society of London. I have sincerely to thank not only the other Officers, but the Fellows generally for numerous marks of attention and kindness, of which I am all the more sensible in consequence of the peculiar circumstances under which I have been placed.

The Copley Medal has been awarded to Professor Louis Agassiz of Boston, in the United States, for the eminent services which he has rendered to various branches of physical science by the incessant labours of more than thirty years of scientific activity.

Commencing his career as a zoologist, Professor Agassiz early turned his attention to Ichthyology, and his '*Histoire Naturelle des Poissons d'eau douce*' not only was in itself a very valuable work, but doubtless led the way to the still more important services which Professor Agassiz was destined to render to the same department of natural history—not the least of which was the great step in ichthyological classification, made by the establishment of the order of Ganoids, a group which has now taken a permanent place in the *Systema Naturæ*.

The '*Monographie d'Echinodermes*,' published between the years 1838 and 1842, and the '*Nomenclator Zoologicus*,' which appeared in the latter year contemporaneously with other investigations of quite a different character, need only be mentioned to bear witness to the remarkable combination of originality, industry, and versatility which characterizes their author. To these excellent qualities may be added tenacity of purpose; for after a long interruption, Professor Agassiz, on his removal to the United States, resumed on a great scale those investigations of the lower forms of animal life which had occupied his younger days. The results of these inquiries, and those of his fellow-labourers Clark and Weinland, are embodied in the magnificently illustrated monographs entitled "*Contributions to the Natural History of the United States*," works

which do equal credit to the naturalists who planned them, and to the State and people whose intelligent munificence renders their publication possible.

Cuvier's great work, the '*Ossements Fossiles*,' embraces, as is well known, an account of the fossil remains of all the higher classes of vertebrated animals; but the founder of palæontology left the difficulties of fossil ichthyology to be grappled with by others, and discerning the especial aptitude of Agassiz for the undertaking, indicated him as his continuator in this department. Nor can it be denied that the author of the '*Recherches sur les Poissons fossiles*,' and the '*Monographie des Poissons fossiles du vieux grès rouge*,' has amply justified the sagacious anticipation of Cuvier. Travelling over the Continent and these islands from one collection to another—never possessing specimens of his own, but obliged to trust to notes and to the sketches of the excellent artist who accompanied him—dealing with remains which were almost always fragmentary and presented far less definite characters to the anatomist than the bones of higher animals,—Professor Agassiz, nevertheless, succeeded, in the course of eleven years, in producing works which form a worthy continuation of the '*Ossements Fossiles*;' and this not merely on account of the excellent descriptions and figures of fossil fish, in vast number, which first appeared in their pages, but because associated with the history of extinct forms are all the complementary investigations into the osteology, dentition, and scale-structure of their recent allies required for their elucidation.

The award of the Copley Medal for these investigations alone would be regarded but as an act of justice by the students of Palæontology, but it must not be forgotten that Professor Agassiz has made many other contributions of no slight value to this branch of science.

It might be supposed that labours of such magnitude and difficulty as those which have just been mentioned, would suffice to give full occupation to one mind, whatever its activity; but while Professor Agassiz was thus becoming familiar to zoologists and palæontologists as one of the most active members of their confraternity, geologists and physical geographers knew him as a vigorous worker and bold theorist in their departments. In fact, what is now known as the '*Glacial Theory*,' although not altogether originated by Professor Agassiz, was greatly extended by him, and assuredly owes the position

it has acquired in science in very great measure to his efforts—his work, ‘*Theorie der erratischen Blöcke der Alpen*’ (1838), his other writings, and his genial eloquence at scientific meetings, having done more than anything else to attract the attention of geologists to the efficiency of ice as a modifier of the earth’s surface, and as a means of transport. Thus led to the consideration of glacial phenomena in general, Professor Agassiz, accompanied by M. Desor and others, next devoted many months of several successive years to the systematic study of the glaciers of his native country—especially to that of the Aar, where under the mighty boulder nicknamed by those whom it sheltered the “*Hôtel des Neufchâtelais*,” inquirers of all nations found not only a welcome, but the nobler hospitality of a free access to all that was being thought and planned and done by the little party of savans of whom Agassiz was the head. The results of the investigations thus laboriously carried on, were embodied in the ‘*Études sur les Glaciers*,’ published in 1840, and the ‘*Nouvelles Études*,’ which appeared in 1847; and apart from all minor contributions, Professor Agassiz will be admitted by all who duly acquaint themselves with the history and present state of the question, to have made two important additions to our knowledge of glaciers. For, in the first place, the general account of the glaciers of the Aar given by Professor Agassiz in the ‘*Nouvelles Études*,’ and the trigonometrical survey of the same glacier executed by M. Wild under his auspices, were works of unrivalled excellence when published, and have never been surpassed. And in the second place, without detracting in any way from the merit due to others, it may with certainty be affirmed that Professor Agassiz was the first to take the proper means to ascertain the relative motion of the central and lateral parts of a glacier, which was done in the autumn of 1841; and that he also had the good fortune to reap the fruit of his arrangements, by being the first to make public (in the ‘*Comptes Rendus*’ for August the 29th, 1842) the novel and to him unexpected result that the centre of a glacier moves faster than the sides.

PROFESSOR MILLER,

It is the happy combination of intellectual genius with diligence and perseverance that has enabled M. Agassiz to arrive at the great results, a brief statement of which has just been read by the Secretary.

In your hands, as Foreign Secretary, I place the Copley Medal which the Council have awarded to M. Agassiz, requesting you that, when you have the opportunity of transmitting it to him, you will at the same time express that as it is the greatest honour the Royal Society has to bestow, so it sufficiently shows the high estimation in which they hold his scientific labours.

A Royal Medal has been adjudicated to Dr. William B. Carpenter, F.R.S., for his Researches on the Foraminifera, contained in four memoirs in the 'Philosophical Transactions,' his Investigations into the Structure of Shell, his Observations on the Embryonic Development of *Purpura*, and his various other writings on Physiology and Comparative Anatomy.

Dr. Carpenter has long held a high place as a systematic writer on Human and Comparative Physiology, and his well-known works have served, more perhaps than any others of their time, to spread the knowledge of those sciences and promote their study among a large class of readers. These writings, moreover, while they admirably fulfil their purpose as systematic expositions of the current state of knowledge on the subjects which they comprehend, afford evidence throughout of much depth and extent of original thought on most of the great questions of Physiology.

While not unmindful, however, of these merits on the part of Dr. Carpenter, or of his earlier special contributions to science, the Council have awarded him the Medal, in accordance with the existing terms of its adjudication, on account of his researches on various branches of Comparative Anatomy and Physiology published in later years.

Among those researches which more especially demand notice on this occasion, the first in point of time is the series of elaborate investigations on the intimate structure of Shell. By these inquiries Dr. Carpenter discovered that a very definite structural arrangement exists in the shells of many mollusca, and presents modifications which serve, in many instances, to characterize natural groups, as being in harmony with the general affinities of the animal. The group of Brachiopoda, in particular, he showed to be thus distinguishable from other bivalves; and he further found that, among the Brachiopoda themselves, certain groups of species are differentiated

from the rest by having their shells perforated with large canals, occupied in the living animal by cæcal prolongations of the mantle. The presence of these perforations, which had previously been considered to be mere surface markings, Dr. Carpenter showed to be a constant character of the Terebratulidæ, and their absence an equally constant character of the Rhynchonellidæ; whilst, in other families, certain genera or subgenera are distinguished by their presence from those in which they are absent. The validity of this distinctive character has since been amply confirmed by Mr. Davidson in his elaborate investigations of British Fossil Brachiopoda.

Dr. Carpenter's first contribution to the minute study of the Foraminifera was a memoir read before the Geological Society in 1850, in which he showed the necessity of a careful microscopic inquiry into the structure of the organisms of the class in question, for the elucidation of their real nature and affinities; and, taken in connection with Professor W. C. Williamson's previous memoirs on *Polystomella crispa*, this memoir may be considered as having laid the foundation for the truly scientific study of the Foraminifera, which has since been vigorously prosecuted by Professor Williamson, MM. D'Archiac and Haime, and Messrs W. H. Parker and Rupert Jones, as well as by Dr. Carpenter himself.

In the four memoirs on the minute structure of the most highly developed forms of this class which Dr. Carpenter has contributed to the 'Philosophical Transactions,' he has described some most remarkable types which were previously quite unknown; he has given a detailed account of the very complex organization existing alike in the foregoing and in types previously well known by external configuration; he has demonstrated the entire fallacy of the artificial system of classification hitherto in vogue, the primary divisions of which are based on the plan of growth; he has laid the foundation of a natural system, based on those characters in the internal structure and conformation of the shell which are most closely related to the physiological conditions of the animal; and, finally, by the comparison of very large numbers of individuals, he has proved the existence of an extremely wide range of variation among the leading types of Foraminifera; often reassembling under a single species, varying forms, which, for want of a sufficiently careful study, have been not merely separated into distinct species, but had been arranged under

different genera, families, and even orders. In this last conclusion, which has an important bearing upon the question of the real value and meaning of natural history species generally, Dr. Carpenter has been fully borne out by the parallel inquiries of Messrs. Parker and Rupert Jones, which, relating to an extensive series of less developed types not especially studied by him, form, as it were, the complement of his own.

In his researches on the embryonic development of *Purpura Lapidulus*, Dr. Carpenter's attention was specially directed to the elucidation of the fact, that, from the many hundreds of egg-like bodies contained in each nidamental capsule, only about thirty embryos are evolved, each of them many times larger than the ovum from which it originated. It had been affirmed by some previous observers that the entire assemblage of ova coalesces into a single mass, which subsequently breaks up into a smaller number of portions, each of which develops itself into an embryo. Dr. Carpenter, on the other hand, was led to the conclusion, that of the total number of egg-like bodies, a few develop themselves into embryos after the usual plan of aquatic gasteropods, while the remainder coalesce into a single mass. To this mass the embryos attach themselves by their mouths, and gradually ingest the particles of which it is composed until it is all shared among them; they thus become distended to many times their original bulk, and on the additional store of nutriment thus obtained, their development is carried on to an advanced stage within the capsule. Dr. Carpenter's account of the process was warmly attacked by certain observers who had given a different explanation of it, but it was fully confirmed by subsequent trustworthy inquirers; and there seems a strong probability that it is true of the Pectinibranchiate Gasteropods generally, since in many of them the like replacement of numerous small egg-like bodies by a few large embryos has been observed.

DR. CARPENTER,

You have been long engaged in the cultivation of a science which, important as it is in various other ways, has this peculiar interest, that it leads us to a more exact knowledge than we could otherwise obtain of that part of the creation to which we ourselves belong; not only explaining the structure and functions of the various organs

of which the human body is composed, but even assisting us to obtain more accurate notions of those higher qualities, those intellectual and moral qualities, by which man is eminently distinguished from all other animals. In the name of the Royal Society I present to you this Medal as a token of their high appreciation of your labours.

A Royal Medal has been awarded to Mr. James Joseph Sylvester, F.R.S., for his *Memoirs and Researches in Mathematical Science*.

Professor Sylvester's mathematical writings extend over a period commencing in the year 1837; separately, and as a whole, they display in an eminent degree the originality and inventive and generalising power of their author, and they have very greatly contributed to the advance of pure mathematics, more particularly as regards the Finite Analysis or Algebra, in the widest sense of the word. Several of the earlier papers relate to subjects which are resumed and developed in those of the last ten years; and on this ground it is right to allude to the researches on the theory of determinants, and the dialytic method of elimination; and also to the remarkable discovery as to Sturm's Theorem. It is well known that the theorem in its original form gave only *a process* for finding the functions which determine the number and limits of the real roots of an equation; the determination of the actual expressions of these functions in terms of the roots was an extension and completion of the theory, the merit of which belongs exclusively to Professor Sylvester. The subject is considered in detail, and various new and valuable results in connexion therewith are obtained, in the elaborate memoir in the 'Philosophical Transactions' for 1853, "On a theory of the Syzygetic relations of two rational and integral functions, comprising an application to the theory of Sturm's functions and that of the greatest algebraical common measure." The same memoir contains also a very original theory of the intercalations or relative interpositions of the real roots of two independent algebraical equations, and a new method of finding superior and inferior limits to the roots of an equation, characterized by the employment of formulæ involving arbitrary coefficients which may be determined so as to bring the limits into coincidence with the extreme roots. The memoir contains also, in connexion with the subjects to which it primarily relates, valuable researches on the theory of Invariants.

In regard to this theory, several capital discoveries belong to Professor Sylvester,—the Law of Reciprocity considered as a law relating to the *number* of Invariants,—Contravariants, which, although now seen to be included in the notion of an invariant, were a conception to which is due much of the progress of the theory,—the theory of the Canonical forms of binary functions of an odd order, and (less completely developed) the more difficult theory for those of an even order,—and Combinants, a theory, the resources of which are still to be developed, but a first fruits of which was the determination, in a manageable form, of the resultant of three ternary quadratic functions.

Only a sketch of a singularly elegant geometrical theory of the derivative points of a cubic curve has as yet been published, in a paper in the 'Philosophical Magazine' (1858).

The very original investigations forming the subject of the Lectures on Partitions are also as yet published in an incomplete form.

There are many other papers which might with propriety be specially noticed, but it is obviously impossible on the present occasion to give anything like a complete account of the labours of Professor Sylvester; among the latest of them are the researches on the Involution of six lines. The nature of the relation can be easily explained. Six lines may be such that, considered as belonging to a rigid body, there exists forces acting along these lines which keep the body in equilibrium; or, what is the same relation between them, they may be such that the equilibrium of a system of forces about these lines as axes, does *not* imply the complete equilibrium of the system of forces. But the consideration of such a system of lines leads to a long series of geometrical theorems relating to curves in space, and ruled surfaces of the third and fourth orders, and opens a wide field for future researches.

PROFESSOR SYLVESTER,

Passing over the metaphysical question as to the origin of those simple conceptions from which as a starting-point all mathematical inquiries must set out, it is plain that whatever is done afterwards is the result of the exercise of the pure intellect; and there is perhaps nothing more remarkable in the history of human nature, or which tends to give us so exalted a notion of the powers of the human mind, as that out of such simple materials so marvellous a fabric should

have been created as that of modern mathematics. Your eminence as a mathematician is so universally acknowledged that it can need no eulogium from myself, and I have therefore only to add that the Medal which I now place in your hands, is awarded to you by the Royal Society as a just acknowledgment of the value of your labours.

On the motion of Sir R. Murchison, seconded by Sir H. Holland, it was resolved,—

“That the thanks of the Society be returned to the President for his Address, and that he be requested to allow it to be printed.

“That the Society feel deeply indebted to Sir Benjamin Brodie for the care he has continued unremittingly to bestow on the interests committed to him as President, and desire to record the expression of their sincere regret for his retirement, and for the cause which has led to it.”

The Statutes relating to the election of Council and Officers having been read, and Mr. John Bishop and Mr. John Lubbock having been, with the consent of the Society, nominated Scrutators, the votes of the Fellows present were collected.

The following Gentlemen were declared duly elected Council and Officers for the ensuing year :—

President.—Major-General Edward Sabine, R.A., D.C.L., LL.D.

Treasurer.—William Allen Miller, M.D., LL.D.

Secretaries.— $\left\{ \begin{array}{l} \text{William Sharpey, M.D., LL.D.} \\ \text{George Gabriel Stokes, Esq., M.A., D.C.L.} \end{array} \right.$

Foreign Secretary.—William Hallows Miller, Esq., M.A.

Other Members of the Council.—John Couch Adams, Esq., M.A., D.C.L.; Sir William George Armstrong, C.B.; Benjamin Guy Babington, M.D.; Sir Benjamin Collins Brodie, Bart., D.C.L.; George Bowdler Buckton, Esq.; William Benjamin Carpenter, M.D.; Sir Philip de Malpas G. Egerton, Bart.; William Fairbairn, LL.D.; Captain Douglas Galton, R.E.; Wm. Robert Grove, Esq., M.A., Q.C.; William Hopkins, Esq., M.A., LL.D.; John Lubbock, Esq.; James Paget, Esq.; Joseph Prestwich, Esq.; William Spottiswoode, Esq., M.A.; John Tyndall, Esq.

The following Table shows the progress and present state of the Society with respect to the number of Fellows :—

	Patron and Honorary.	Foreign.	Having com- pounded.	Paying £2 12s. annually.	Paying £4 annually.	Total.
December 1, 1860..	7	49	338	7	272	673
Since compounded..	.....	.....	+1	.....	—1	.....
Since elected .....	.....	.....	+6	.....	+10	+16
Since deceased	—1	—1	—19	—2	—9	—32
Withdrawn .....	.....	.....	.....	.....	.....	.....
Defaulter .....	.....	.....	.....	.....	.....	.....
November 30, 1861	6	48	326	5	272	657

December 5, 1861.

Major-General SABINE, R.A., President, in the Chair.

The President stated that Mr. William Robert Sievier, who was readmitted into the Society on the 17th January, 1856, after having ceased to be a Fellow through default of payment of his annual contribution, had from a similar cause again ceased to be a Fellow in November 1860, and had applied for readmission. Mr. Sievier's letter to the Council was read, explaining the circumstances under which, during his absence on the Continent, the omission of payment had taken place. The Statute applying to the case was also read, and in accordance therewith notice was given that the question of Mr. Sievier's readmission would be put to the vote at the next Meeting.

Mr. Charles Spence Bate was admitted into the Society.